



ORNL'S LABORATORY PROTECTION DIVISION was one of many Nuclear Division groups whose employees met or exceeded their goal during the recent United Way campaign. LPD members pictured are, from left, I. S. Campbell, Ronald L. Taylor, A. J. Harmon, A. Barry Cash, C. C. White and Frances J. Wright.

Employees contribute nearly \$1 million to UW

1980 United Way contributions from the Division's three Oak Ridge facilities total \$882,068, or approximately 98.8 percent of this year's goal of \$893,000. Final figures on a plant-by-plant basis, with 1979 totals for comparison, are as follows:

	1979	1980
ORGDP	\$263,704	\$271,743
Y-12	\$223,959	\$233,435
ORNL	\$321,522	\$348,647
Subtotal	\$809,185	\$853,825
Executive payroll and Corporate contributions	\$ 25,841	\$ 28,244
Total	\$835,026	\$882,069

The following amounts will be distributed to agencies in these six counties:

Anderson	\$419,293
Blount	\$9,376
Knox	\$250,167
Loudon	\$42,063
Morgan	\$27,054
Roane	\$130,504

The remainder of the near-million-dollar figure goes to other counties in the area.

Although this year's drive fell slightly short of its published goal, there were several positive aspects in the campaign. Many groups within the Nuclear Division, for example, reached or exceeded their own goals and certainly deserve to be commended.

The thousands of people who will benefit from the dedicated efforts of Division employees should also be considered. Each year, Carbiders give generously of their time and money to help those in need. This is no small achievement, and helps contribute to a sense of community, as noted in this year's campaign videotape.

Employees and United Way staff at Paducah are due a special note of thanks. During this year's campaign, they not only contributed over \$90,000, but also passed the one-million-dollar milestone for total UW contributions since 1953.

Perhaps William O. Harms, ORNL campaign chairman, put things into a proper perspective at the recent appreciation luncheon. "Some of us may have been disappointed because our drive didn't quite reach its goal," Harms said. "But we must remember that in a campaign like ours for the United Way, no one loses. There are only winners."

And there will be many winners during the coming year, thanks to your generosity.

Around the corporate circuit

UNION CARBIDE CORPORATION has reported that third quarter sales were slightly higher than those of the 1969 third quarter. Price increases in the quarter, however, were offset by lower sales volume, and net earnings for the quarter were 14 percent lower, on a comparable basis, than those of the prior year's quarter.

"Third quarter results were encouraging," according to William S. Sneath, chairman and chief executive officer, "in that our earnings were above those of the second quarter of 1980. And for the nine months, our earnings on a comparable basis were slightly above 1979 earnings for the same period. If sales remain at the same level as those of the third quarter, we expect earnings for the year to be almost the same, on a comparable basis, as last year's."

AGRIGENETICS CORPORATION, Denver, Colo., has purchased the Jacques Seed Company from Union Carbide Agricultural Products Company, Inc. Agrigenetics is a diversified seed and genetic research company with major programs focused on agronomic applications of recent developments in cellular and molecular biology.

The Jacques Seed Company, a rapidly growing full-line seed concern, specializing in hybrid seed corn, was originally acquired by Union Carbide as part of the acquisition of Amchem Products, Inc., from Rorer-Amchem in 1977. The seed company is headquartered in Prescott, Wisc., and has seven processing plants in the United States corn belt with domestic and export markets.

Inside ...

These visitors to the Fusion Energy Division were among the nearly 5000 who attended ORNL Family Day '80 on November 8. For additional pictures, please turn to page 2.

Also in this issue is a special section summarizing the financial status of Union Carbide Nuclear Division Benefit Plans on December 31, 1979. The reports, found on pages 4 and 5, are prepared in accordance with instructions from the U.S. Department of Labor and are required by the Employee Retirement Income Security Act of 1974 (ERISA).

Other features:

Question Box	page 3
Roger Lankford, ORGDP "doodler"	page 7
Dr. Lincoln	page 8



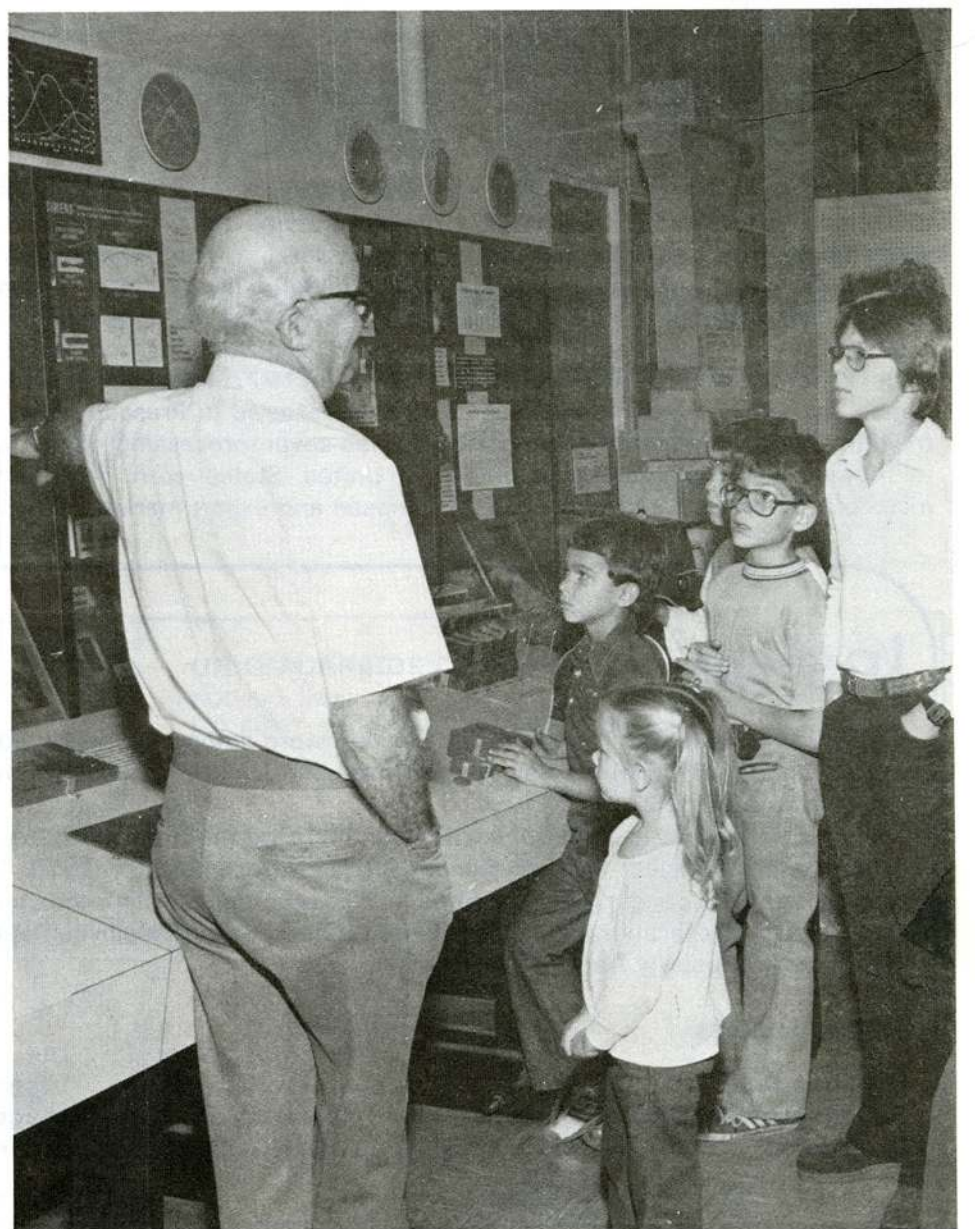


Nearly 5000 attend ORNL Family Day

Some 4700 Division employees and retirees and their families and friends attended ORNL's Family Day '80, which was held Saturday, November 8, at the X-10 and Y-12 facilities.

The sunny autumn weather brought out young and old alike to sample the Laboratory's special displays, demonstrations, exhibits and guided tours.

If you spot yourself, your friends or members of your family in one of these pictures and are interested in obtaining a copy, contact the ORNL Public Relations Office at 4-4163.



Question Box

Does Carbide give to Knox College?

QUESTION: You recently stated that Union Carbide made grants in 1979 totaling approximately \$1 million to colleges and universities. Was any of this to Knoxville College? If not, how can this local college for minorities get on the grant list?

ANSWER: A grant was made to Knoxville College by Union Carbide in 1979. As a matter of fact, Knoxville College was receiving a grant from Union Carbide as early as 1968.

Others smoking

QUESTION: Since smoking damages the lungs of others as well as those who smoke, why doesn't Carbide require that smoking be done only in designated areas?

ANSWER: Except in areas where smoking would present a fire hazard, Company policy is presently informal and encourages the development of mutual understanding and consideration among involved employees. Smoking is a matter of personal preference; however, it is desirable for employees to communicate with each other where the practice is causing discomfort to some.

There are currently no OSHA or other consensus standards for exposure to tobacco smoke. Concern for the comfort of employees has

resulted in some conference room signs urging voluntary consideration of nonsmokers.

Many employees have effectively dealt with this problem in their own offices by displaying "No Smoking Please" signs and removing all ash trays.

Does illness defer raise?

QUESTION: Why does one ORNL division's management choose to defer raises for employees who have been absent more than 20 days in a year, when other divisions choose not to go by the guidelines?

ANSWER: It is Company policy to consider absences in connection with salary increases, including absences due to illness. The criterion of 20 work days is used only as a guide for review purposes; it is not applied as a hard and fast rule.

Patents Granted

Anthony J. Caputo, Dante A. Costanzo, Walter J. Lackey, Jr., Frank L. Layton and David P. Stinton, all of ORNL, for "Method of Evaluating the Integrity of the Outer Carbon Layer of Trisco-Coated Reactor Fuel Particles."

Paul A. Haas, ORNL, for "Process for Decomposing Nitrates in Aqueous Solution."

Mechanical Engineering names Brown, Green, Thompson to posts

The Experimental and Mechanical Engineering organization for the Nuclear Division has been renamed the Mechanical Engineering Division. Donald D. Cannon has announced the following organization changes: Martin Brown will assume responsibility for Mechanical Engineering at ORGDP; Richard C. Green will head the Mechanical Engineering function for the production and related development activities associated with the Y-12 Plant; and Philip B. Thompson will be responsible for an expanded Research Engineering organization. Research Engineering provides mechanical engineering services to ORNL in areas of Fusion and Engineering Technology programs and to the Y-12 Development Division for the Advanced Isotope Separation program.

Thomas E. Shannon will continue as manager of Systems Engineering for the ETF Design Center.

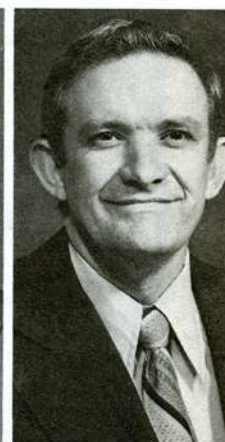
Brown, a native of Bedford County, joined Union Carbide in 1967 after working as a design engineer for General Dynamics. He has a BS degree in mechanical engineering from the University of Tennessee. He and his wife, Shirley, live at 305 Triplett Road, Knoxville. They have two children.

Green was born in Fort Payne, Ala., and graduated from Auburn University. He joined Union Carbide in 1959 and has worked in Engineering and Dimensional Inspection.

He and his wife, Connie, live at Route 1, Woodlawn Road, Lenoir City. They have three children.



Brown



Green



Thompson

Thompson, a native of St. Louis, was engineering manager for rocket propulsion systems design at McDonnell-Douglas Astronautics in Huntington Beach, Calif., before joining Union Carbide in 1974. A graduate of the University of Missouri, he has also done graduate studies at the University of California at Los Angeles.

He and his wife, Elaine, live at 1071 West Outer Drive, Oak Ridge. They have three children.

Savings Plan-Personal Investment Account

	Fixed Income Fund	UCC Stock	Equity Investment Fund
December 76	13.0553	59.2723	8.8166
December 77	14.2017	40.9096	8.0427
July 80	17.7883	44.7291	11.4957
August 80	17.8746	46.0592	11.5199
September 80	18.0487	46.4911	11.7894
October 80	18.1805	46.5648	12.0227

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 9.1% for 1980. Union Carbide stock values are the average cost of stock purchased during the month. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price of each unit is determined by dividing the total value of the securities by the number of units in the Fund.

Save Energy / Share The Ride

ORNL

VAN POOL RIDER from West Knoxville (Bearden to Farragut) to South and West Portals, 8-4:30. Dean Treadway, plant phone 4-6580; home phone 584-4879.

RIDE from Highway 11W area, Northeast Knox County, to South Portal, 8-4:30. Donna Slagle, plant phone 4-6151.

CAR POOL MEMBERS from Karns area to any portal, 8-4:30 or 8:15-4:45. Fred Gibson, home phone 690-2788.

CAR POOL MEMBERS from West Hills/Middlebrook/Cedar Bluff area of West Knoxville to any portal, 8-4:30 or 8:15-4:45. J. W. Nave, plant phone 4-4485.

ONE or TWO CARPOOL MEMBERS from within or near the area bounded by Pennsylvania, West Outer, Highland and Hillside Avenues to East Portal, 8:15-4:45. T. J. Burnett, plant phone 4-6683; or Pat Roberts, plant phone 4-6744.

Y-12

RIDE from Nickle Road (Cumberland Estates Shopping Center area,

Northwest Knoxville) to North Portal, 8-4:30. Marie Reich, plant phone 4-1580.

ORGDP

BUS RIDER from Rockwood, Harri-man, Kingston, straight day. R. K. Hull, plant phone 6-0204; home phone Harriman 882-5618.

RIDERS from West Knoxville, Concord, Farragut areas, to Portals 5 and 6, 8-4:30 shift. Lee Ford, plant phone 4-9711; home phone 966-8331.

RIDERS to form car pool from Eaton Cross Roads to Portals 5 and 6, A Shift. Paul Rutter, plant phone 4-8297.

RIDE from Cherry Street, Knoxville, to FOB Building, 7:30-4:15 shift. Mary Swann, plant phone 6-1084; home phone Knoxville 523-5871.

BUS RIDERS from Oak Ridge to Portals 1, 2 and 4, straight day. CONVENIENT... RELIABLE... INEXPENSIVE. Wayne, plant phone 4-8600; home phone Oak Ridge 483-9948.



FEATURED PERFORMERS IN "THE SILVER WHISTLE," to be presented at the Old Roane County Courthouse in Kingston, include, from left, Lucille Whitehead, Oscar Taylor, Ed Strain, Claude Stringer, Helen Eblen and Inez Martin. Several Nuclear Division employees are involved in the production, which is scheduled for 8 p.m. on Thursday, Friday and Saturday, December 4, 5 and 6.

ABOUT BENEFITS

The reports in this special section summarize the financial status of various UCC-ND Benefit Plans on December 31, 1979. They are prepared in accordance with instructions from the U.S. Department of Labor and are required by the Employee Retirement Income Security Act of 1974 (ERISA).

SUMMARY ANNUAL REPORT — 1979 INSURANCE PLANS NUCLEAR DIVISION

These are the Summary Annual Reports of the Insurance Plans listed below. The complete annual reports have been filed with the Internal Revenue Service, as required under the Employee Retirement Income Security Act of 1974 (ERISA). The plans have contracts with the insurance carriers shown to pay all claims incurred under the terms of the plans. The plans are "experience rated" contracts so the premium costs are affected by, among other things, the number and size of claims.

Plan Name	Total Premiums Paid	Total Benefits Paid
Hospital-Surgical Insurance for Employees of UCC Nuclear Division	\$15,185,415	\$15,051,300
Major Medical Insurance for Salaried Employees of UCC Nuclear Division	\$2,007,365	\$2,088,982
Special Medical Insurance for Hourly Employees of UCC Nuclear Division	\$1,670,073	\$2,024,694

The Employer Identification Number (EIN) for all plans is: 13-1421730.
You have the right to receive a copy of the full annual report, or any part thereof, on request.
The report includes insurance information including sales commissions (if any) paid by insurance carriers.

IF YOU DESIRE MORE DETAILED INFO...

To obtain a copy of these full annual reports, or any part thereof, write: The Benefit Plans Administrator, Union Carbide Corporation, 4th Floor, 270 Park Avenue, New York, New York 10017. The charge to cover copying costs will be 10 cents per page for any part thereof.
You also have the legally protected right to examine the annual reports at the main office of the plan at 270 Park Avenue, 4th Floor, New York, New York 10017, and at the U.S. Department of Labor in Washington, D.C., or to obtain copies from the U.S. Department of Labor upon payment of copying costs. Requests to the Department should be addressed to: Public Disclosure Room, N4677, Pension and Welfare Benefit Programs, Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20216.

SAVINGS

The financial status of the Plan and Group Life Insurance information appeared in the November issue of *World*. It is not contained on this page.



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PLAN

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RETIREMENT PROGRAM FOR EMPLOYEES OF UNION CARBIDE CORPORATION — NUCLEAR DIVISION

This is a summary of the annual report for the Retirement Program (EIN13-1421730) for the year 1979. The annual report has been filed with the Internal Revenue Service, as required under the Employee Retirement Income Security Act of 1974 (ERISA).

Basic Financial Statement

Benefits under the plan are provided by Trust and Annuity Contracts. Plan expenses were \$31,719,045. These expenses included \$31,719,045 in benefits paid to participants and beneficiaries. A total of 25,937 persons were participants in or beneficiaries of the plan at the end of the plan year, although not all of these persons had yet earned the right to receive benefits.

The value of plan assets, after subtracting liabilities of the plan, was \$453,769,763 as of December 31, 1979, compared to \$397,429,803 as of January 1, 1979. During the plan year the plan experienced an increase in its net assets of \$56,339,960. The increase included unrealized appreciation or depreciation in the value of plan assets; that is, the difference between the value of the plan's assets at the end of the year and the price the plan originally paid for those assets. The plan had total income of \$88,059,005, including employer contributions of \$47,666,846, employee contributions of \$291,307, and earnings from investments of \$34,963,796.

The plan has contracts with The Metropolitan Life Insurance Company and The Prudential Insurance Company of America which allocate funds toward group annuities. The total premiums paid for the plan year ending December 31 were \$31,719,045.

Minimum Funding Standards

An Actuary's statement shows that enough money was contributed to the plan to keep it funded in accordance with the minimum funding standards of ERISA.

You have the right to receive a copy of the full annual report, or any part thereof, on request. The items listed below are included in that report:

1. an accountant's report;
2. assets held for investment;
3. leases in default;
4. insurance information including sales commissions paid by insurance carriers; and
5. actuarial information regarding the funding of the plan.

IF YOU DESIRE MORE DETAILED INFO...

To obtain a copy of the full annual report, or any part thereof, write to: The Plans Administrator, Union Carbide Corporation, 4th Floor, 270 Park Avenue, New York, New York 10017. The charge to cover copying costs will be 10¢ per page for any part thereof. The cost of each of the full reports is eighty cents.

You also have the right to receive from the plan administrator, on request and at no charge, a statement of the assets and liabilities of the plan and accompanying notes, or a statement of income and expenses of the plan and accompanying notes, or both. If you request a copy of the full annual report from the plan administrator, these two statements and accompanying notes will be included as part of that report. The charge to cover copying costs given above does not include a charge for the copying of these portions of the report because these portions are furnished without charge.

You also have the legally protected right to examine the annual report at the main office of the plan, 270 Park Avenue, 4th Floor, New York, New York 10017, and at the U.S. Department of Labor in Washington, D.C., or to obtain a copy from the U.S. Department of Labor upon payment of copying costs. Requests to the Department should be addressed to Public Disclosure Room, N4677, Pension and Welfare Benefit Programs, U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20216.

Happy
holidays!



TALKING TURKEY—Or better, yet, measuring it? J. D. Turner measured endless shotgun patterns to determine winners in the Paducah Plant's annual turkey shoot. The three-day event allowed employees and their families to try their hand and eye at bagging a holiday turkey without using a turkey call or stalking the woods. Approximately 82 turkeys were awarded hopeful hunters.

Retirees plan Christmas party

Union Carbide Retirees Association is planning a big Christmas party Saturday, December 6, at the Senior Center in Oak Ridge. Festivities get under way at 8 p.m. and music provided by Bill Polluck will continue until midnight. Additional entertainment will be provided by Dance Arts, Inc.

Punch and refreshments will be available. All newly retired Carbiders

are cordially invited to participate in the party.

Virginia and Ray Hill are co-chairing the committees and are assisted by Mr. and Mrs. Charles Williams, Hazel Pratt, Mr. and Mrs. Clyde Bollen, Marge Walker, Rubye Ratjen, Mr. and Mrs. Robert L. Green, Virginia Donahue, and others.

Additional information concerning the party may be obtained by calling Oak Ridge telephone 576-1786.

Application repeated for Oak Ridgers

The application for Christmas parties for Carbiders' children appears again below. It has been announced that Austinini will perform a new act

for the December 20 affairs that is described as "out of this world." There are four parties set at the Oak Ridge High School.



Application for Tickets to Oak Ridge Christmas Parties



FOR CHILDREN OF UNION CARBIDES EMPLOYEES
(AGES 2-10 ONLY)

SATURDAY, DECEMBER 20

Employee's Name _____
Home Address _____
City _____ Zip _____
Plant Address _____ Mail Stop _____
Number of Tickets (Children) _____
Number of Tickets (Adults) _____

—CHECK TIME PREFERRED—

Saturday, December 20

Only

9 A.M. _____ 11 A.M. _____ 1 P.M. _____ 3 P.M. _____

Please mark first and second choice (write in space "1" or "2") as only a limited number of tickets will be issued for each party. Preference will be given to early applicants and if tickets for first choice are exhausted, tickets for second choice will be issued.

Return this form, properly and completely filled out, to the Carbide Recreation Office, Building 9711-5, Mail Stop 1, Y-12 Plant. Please apply for tickets before December 14.

Around the alleys...

ORNL C League...

The Hit Men have a better won/lost record than any other team in the ORNL C League. They are above the Easy Rollers and Cellar Dwellers. The Pin Heads' Jernigan put a 716 handicap series on the boards recently, while the Hit Men's J. R. Jones rolled a 274 single game.

ORNL A League...

The Dynamics have a good hold on the lead in the ORNL A League, rolling above the Zots and Limits. Individual team honors went to the Dynamics recently as they set up a 3039.

Carbide Family Mixed...

The Oops team has a two-point lead in the Carbide Family Mixed League, rolling above Sandy's Crowd and the Four Chippers. High scratchers are Don Carpenter with a 566 and Edith Duckworth with a 568. Nelline Ross rolled a 222 scratch, 278 handicap game recently.

Y-12 Classic...

The Kingpins keep a slim lead in the Y-12 Classic League, as the Splinters and Smelters tie for second place. The Atta-Boys keep the high post of 3209 in handicap series scoring, with their 1135 as high singles. Scott Krebs still hangs onto the top individual slot, with a 712 handicap series. Ray Smith's 287 single is still high, too.

Monday Mixed...

The Four Eagles remain in first place in the Monday Mixed League, with the 3 Tall-1 Short team three points behind. Andrea Reed hit a new high handicap game recently, rolling a 235.

UCC Mixed...

The Split Images score high in a recent night of rolling to stand tall in the UCC Mixed Bowling League. They are five out in front of the Scalawags. Rolling Stones hold the high-series, 2599 handicap total! Dave Mosley's 698 is high individual series; while Cindy West's 678 is high on the women's side.

ORGDP Women's...

The Payoffs still have a good lead in the ORGDP Women's Bowling League, out in front of the Spotters. Sue Davis's 208 scratch was a high recently, with a 602 series, 683 handicap top.

K-25 Tuesday...

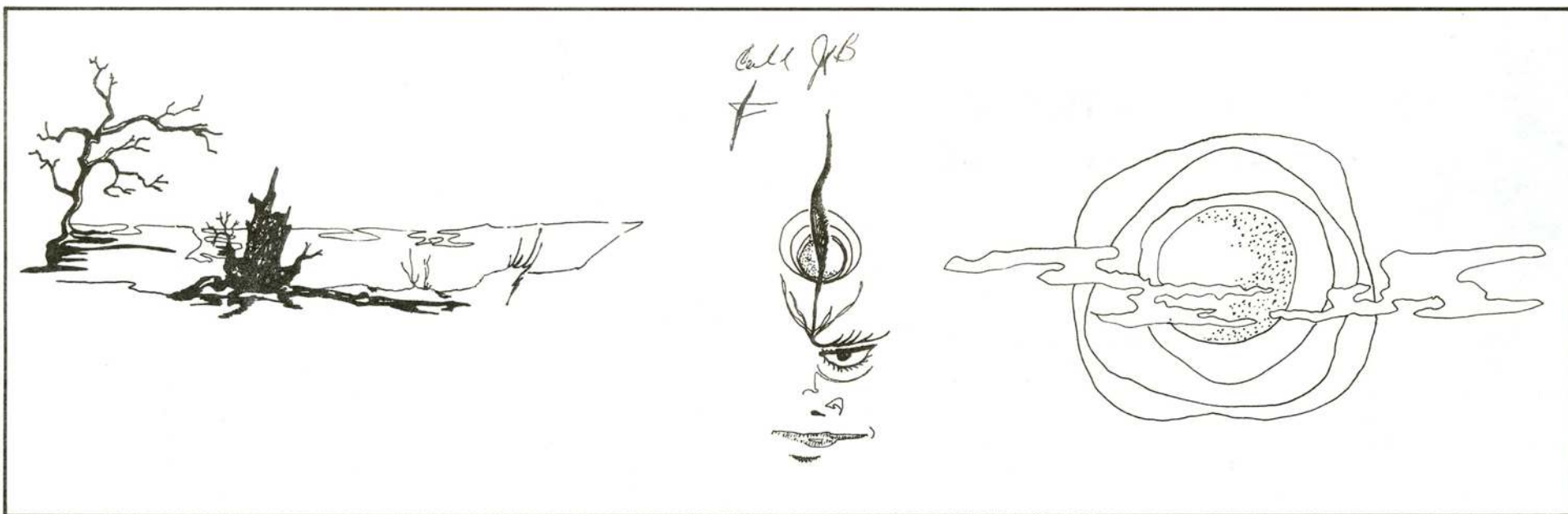
The Mishaps keep top spot in the K-25 Tuesday League, bowling above the All Stars. The All Stars, however, hold top series in the league thus far, with a total of 3107, a 1110 single handicap game. J. H. Peer's 649 scratch, 721 series stand high above teammates, with his single of 246, 270 there also.

K-25 Wednesday...

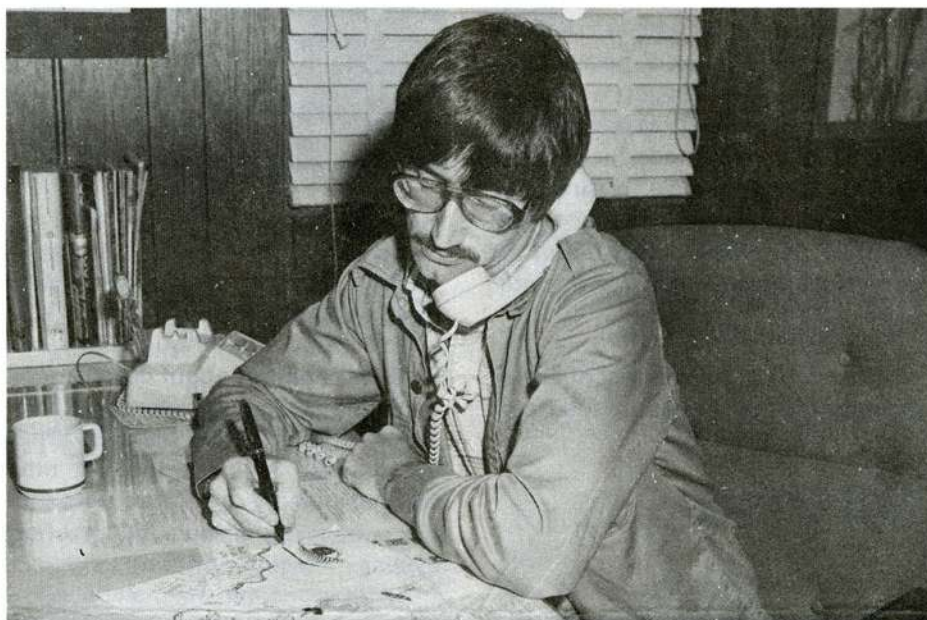
The Operators take over the top position in the K-25 Wednesday League bowling above the Amps. The Amps, 3110 series is high in handicap scoring, while individual games go to the Sues Sooners, with a 1114. Doug Nelson's 723 series is high in individual scoring.



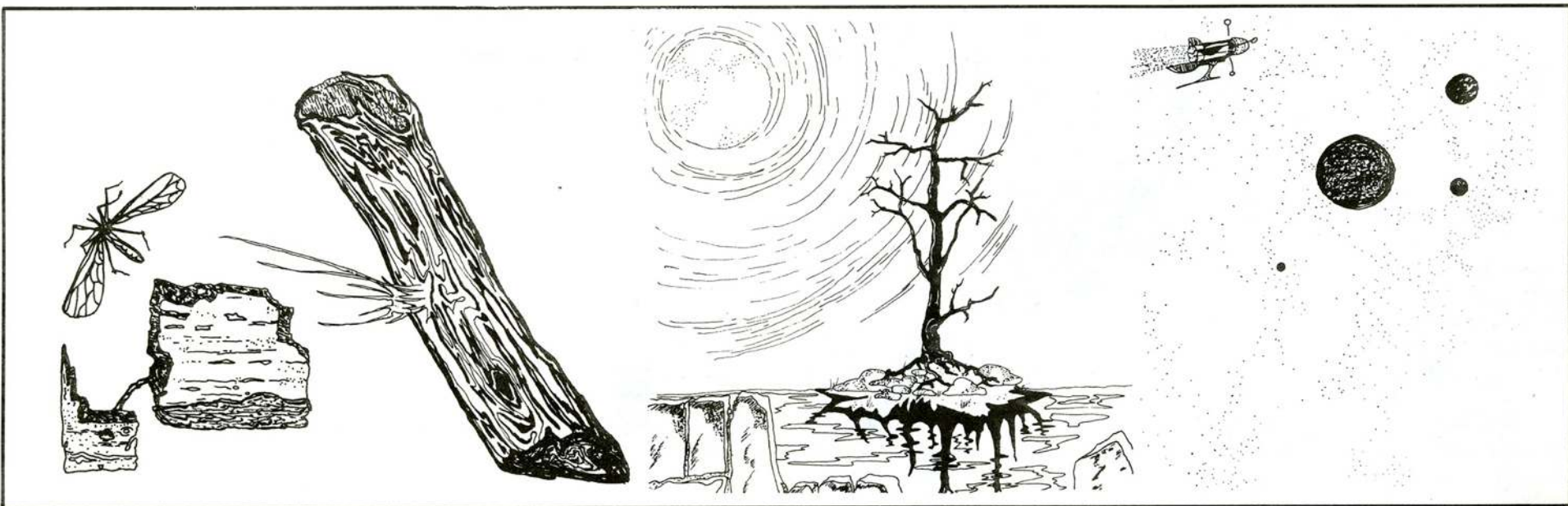
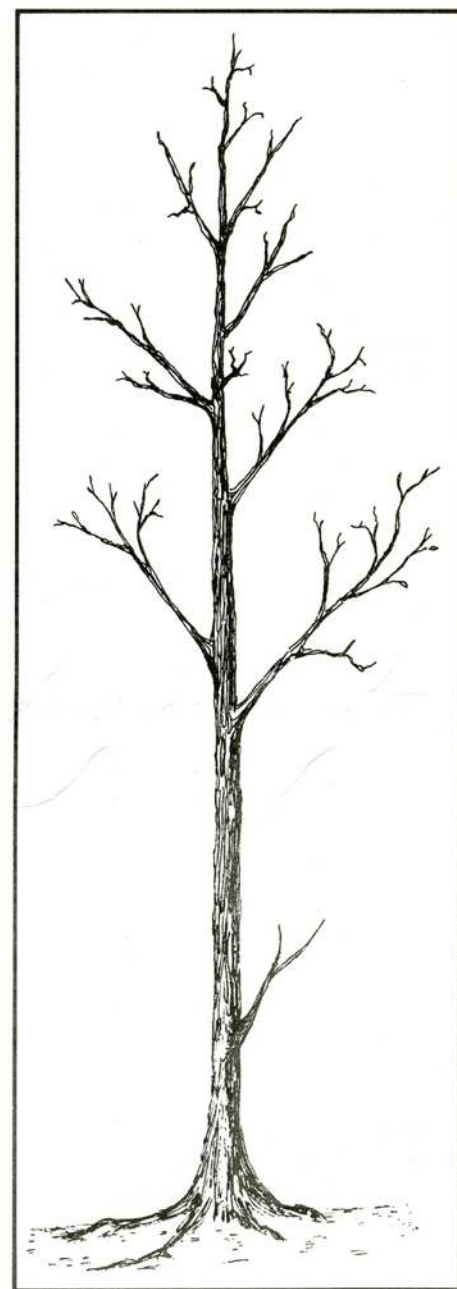
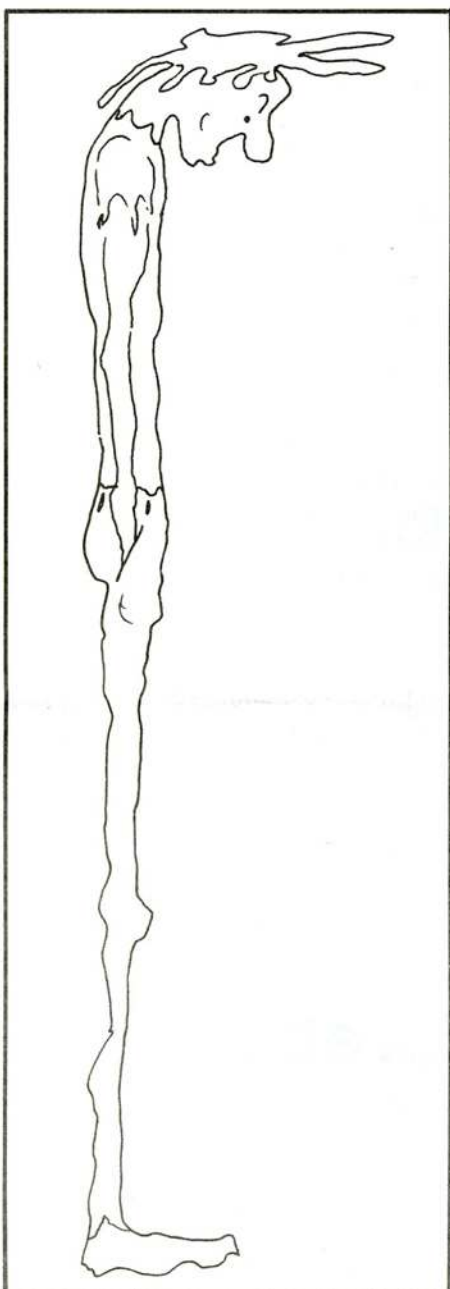
Austinini and friend



Doodle while you work — Lankford



What kind of habits do you have while talking on the telephone? Kathy Coleman, ORGDP Employee Relations, arranges a rainbow on her desk using a box of assorted colored paperclips. Sandy Duncan, ORGDP Safety Department, also plays with paper clips. When that doesn't work, she gives herself a neck massage. Roger Lankford, an industrial hygienist at ORGDP, begins his telephone conversations with doodling, and usually finishes with a unique style of art. He isn't always sure of what he's drawing, which is probably why most of his work doesn't have a name. He doesn't sell his art, and since most of it is on scratch paper, he doesn't display it either. Some, he says, are mailed to his wife, Trish, just to brighten her day. The Lankfords are currently occupied overseeing the construction of a new home in Sugar Grove Valley. Do you doodle? Look what it can lead to!





Bypass surgery for heart disease

by T. A. Lincoln, M.D.

In 1964, the first bypass operation for coronary heart disease was performed at Methodist Hospital in Houston. The second operation was performed in 1967. Since then, some 700,000 operations have been completed. Over 100,000 (costing from \$15,000 to \$20,000 each) are performed every year. This article, which assesses the value of this major surgical procedure, is based on reviews of over 700 articles and letters in medical literature.

During aortocoronary bypass grafting, the patient's body temperature is lowered, the chest is opened and the heart is stopped. Circulation is artificially maintained. Portions of a saphenous vein, which has been previously removed from one leg, are connected between the aorta, the huge artery that carries fresh blood from the heart to the rest of the body, and the branches of the coronary

arteries that have been completely or partially obstructed by atherosclerosis. In this way, blood is allowed to flow through the graft around the obstruction, thus ensuring a better oxygen supply to the heart muscle.

Surgical risks vary

When the procedure is done by skilled and experienced surgical teams, with patients who are reasonable risks, only about 2 percent die within 30 days of surgery. There is still a fairly wide range of graft suture techniques and methods for protecting the heart muscle during the procedure. As a consequence, the operative risk varies, depending on the surgical group and the hospital involved.

In about 10 to 15 percent of aortocoronary bypass procedures, a heart

attack occurs either during the operation or immediately following it. In this case, heart attack is defined as damage to heart muscle because of inadequate heart muscle preservation during the procedure. When damage occurs, the immediate post-operative mortality rate ranges from 12 to 64 percent in various studies. Most immediate surgical deaths and almost all deaths within 30 days of the operation are due to these heart attacks (myocardial infarctions). Newer techniques are reducing their frequency.

Some 10 percent of the bypass grafts become obstructed during the first two weeks after surgery and another 10 to 20 percent during the first year. After that, graft occlusion occurs at a lower rate, about two percent per year, over the next five years. Once the graft is proven to be functioning adequately, the long-term outlook for the patient seems to depend primarily on the progression of the disease in the ungrafted arteries.

Angina patients benefit

Many studies of the long-range effectiveness of bypass surgery have been conducted. Although there may be disagreement about details, most cardiologists (not surgeons) agree on several general conclusions. When the disease involves the left main coronary artery (a relatively uncommon but dangerous occurrence), bypass surgery prolongs life. In patients who have extensive involvement of the three main coronary arteries, bypass surgery **appears** to prolong life.

Patients who have severe angina that does not respond to medical treatment usually receive great relief from chest pain after the surgery.

Evidence that life is prolonged has usually not been found, except as previously noted. Patients with the fewest coronary problems fare best after surgery. Such patients also fare best with medical treatment alone.

Researchers at Duke University Medical Center developed an extensive data collection and analysis system using a computer. Eighty-nine clinical factors were observed in 490 patients who had surgery and 611 who had only medical treatment. Differences in the two groups, except for surgery, were minimal. After four years, 82 percent of the patients who had surgery survived, and 78 percent of those who had only medical treatment survived. The difference is not considered statistically significant.

Prevention is crucial

One useful aspect of bypass surgery is to convince the patient that disease prevention is urgently needed. After such surgery, it is easier to convince patients that not smoking, eating balanced meals, controlling blood pressure, exercising and learning to relax are crucial for survival.

Probably the most important thing to remember is to avoid panic when the first episode of angina occurs. Don't be stampeded into immediate surgery. Get the best possible advice, and carefully consider the risks and alternatives. Studies of surgery performed for unstable angina or for previous heart attacks have failed to unequivocally establish the value of the procedure. Relief of angina that is unresponsive to medical treatment is a reasonable justification for surgery. Remember that long-term survival depends primarily on success in delaying the progress of existing disease — not on its surgical bypass.

Anniversaries

PADUCAH

25 YEARS

Charles W. Hawkins, Billy W. Hulen, Glenn H. Young, Robert W. Blackburn, Paul E. Anderson and Florence M. Allison.

Y-12 PLANT

35 YEARS

Franklin P. Munsey, Dispatching; Wallace E. Piece, Buildings, Grounds and Maintenance Shops; Charlie C. Bridges, Beta 2 Chemistry; Alva L. Fischer, Material Procurement; and Louise D. Rogers, Quality Evaluation.

30 YEARS

William T. Carey, 9214 Rolling Mill; David R. Allison, Tooling Coordination; Ernest S. Lewis, Buildings, Grounds and Maintenance Shops; Gentry R. Ogle, Special Services; James J. Crowe, Casting Department; Charles F. Laymance, Special Services; Harley H. Law, General Machine Shop; William M. Simpson Jr., B-2 Expansion Assembly; Thomas E. Hillard, Reproduction; Fred E. Crowder, General Can Fabrication Shop; Lawrence E. Sikes, Process Maintenance; Alice W. Hair, Casting; Bert E. Burdette and Burl R. Price, Research Services.

25 YEARS

Benny H. Samuel, Charles E. Lowe, Donald A. Lanham, Joseph R. Morton, Glenn V. Wells and Robert C. Anderson.

20 YEARS

Glen H. Shields, Lloyd D. Scott and James E. Driskill.

ORNL

35 YEARS

Arthur D. Warden Jr., Industrial Safety and Applied Health Physics.

30 YEARS

Hugh Binkley, Plant and Equipment; William H. Duckworth, Engineering Technology; Reginald Gwin, Engineering Physics; James R. Muir, Industrial Safety and Applied Health Physics; Charles A. Pritchard, Analytical Chemistry; Larry R. Ruth, Instrumentation and Controls; Othar K. Tallent, Chemical Technology; and Almos A. Walls, Operations.

25 YEARS

David B. Allen, Ananias C. Burger and Jack A. Hunt.

20 YEARS

Richard D. McCulloch, Jane L. Patterson, Raymond L. Scott Jr., James D. Weisgerber, Susan K. Whatley and Lucille C. Whitman.

ORGDP

35 YEARS

Trent Bridges, Chester Williams, Leon White, Clarence Mitchell, Clarence Bostic, all in the Maintenance Division; John Dodson, Operations; and Edgar Hamilton, Technical Services.

Safety Scoreboard

Time worked without a lost-time accident through November 20:

Y-12 Plant	59 Days	2,093,000 Employee-Hours
ORGDP	62 Days	1,995,316 Employee-Hours
ORNL	193 Days	4,617,705 Employee-Hours
Paducah	114 Days	1,112,000 Employee-Hours

UNION
CARBIDE

UNION CARBIDE CORPORATION

NUCLEAR DIVISION
P.O. BOX Y, OAK RIDGE, TENNESSEE 37830

BULK RATE
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Union Carbide
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